

REMARKS

Claims 11 and 18 have been removed from consideration but not cancelled, and will be considered upon allowance of a generic claim.

Claims 1 and 10 have been rejected under 35 USC 102(e) as being anticipated by U.S. patent no. 6,121,852 ("Mizoguchi 852"). Claims 1 and 10 have been cancelled, rendering the rejection to these claims moot. Claims 5, 6 and 7, which previously depended from claim 1, have been rewritten in independent form, including the limitations of claim 1. Claims 5, 6 and 7 are discussed below.

Claim 7 has been rejected under 35 USC 103(a) as being unpatentable over Mizoguchi 852. Applicants respectfully traverse this rejection because the cited references do not disclose or suggest every element of claim 7, as the following analysis shows.

Claim 7, which has been rewritten in independent form, describes two separate magnetic layers with a conductor disposed between them, the magnetic layers separated from the conductor by dielectric layers. In the Office Action, Figs. 11-12 are cited as disclosing one magnetic layer/dielectric layer combination, and Figs. 23A-23B are cited as disclosing the other. However, both sets of figures only describe a magnetic layer/dielectric layer on one side of a conductor. The only distinction between Figs. 11-12 and Figs. 23A-23B is in whether the conductor or the magnetic layer is closer to the substrate. There is no suggestion in this combination of figures to have magnetic layers on both sides of the conductor. Claims 8 and 9

depend from claim 7 and therefore contain the same limitations not disclosed or suggested by the cited references.

Claims 6, 8 have been rejected under 35 USC 103(a) as being unpatentable over Mizoguchi 852 in view of U.S. patent no. 6,404,317 ("Mizoguchi 317"). Applicant respectfully traverses this rejection because the cited references do not disclose or suggest every element of either claim, as the following analysis shows.

Claim 8 is allowable based on its dependency from claim 7, as previously described. In addition, each of claims 6, 8 recites a magnetic layer forming slot. Fig. 38 of Mizoguchi 317 is cited as showing a slot. However, Fig. 38 of Mizoguchi does not show a slot, but merely shows a spiral shaped magnetic layer with no distinguishing characteristics that could be interpreted as a slot. Nor does Mizoguchi provide any motivation for providing a slot in the magnetic layer. The cited reason (imparting magnetic anisotropy) can only be derived through the use of improper hindsight, but the reason is moot since there is no suggestion of a slot in the cited references.

Claim 9 has been rejected under 35 USC 103(a) as being unpatentable over Mizoguchi 852 in view of Japanese patent JP 6-124843 ("Mino"). Applicant respectfully traverses this rejection because the cited references do not disclose or suggest every element of either claim, as the following analysis shows.

Claim 9 is allowable based on its dependency from claim 7, as previously described. In addition, claim 9 recites that the two magnetic layers of claim 7 are connected. Fig. 1B of Mino is cited as disclosing this limitation. However, Mino does not disclose or suggest that two

separate magnetic layers are connected. Although Mino shows two layers (10, 12) of some type, Mino does not show that the two layers are connected to one another. In fact, Mino teaches away from this limitation in Fig. 1B by showing that each layer has its own connection pads (16, 17 for one layer and 18, 19 for the other layer). Separate connection pads would be totally unnecessary if the layers were already connected.

Claims 2-5, 12-15, 17 have been rejected under 35 USC 103(a) as being unpatentable over Mizoguchi 852 in view of a 1993 IEEE article by A. Fessant ("Fessant"). Applicant respectfully traverses these rejections because the cited references do not disclose or suggest every element of any pending claim, as the following analysis shows.

Claims 2-4, 12-15 and 17 have been cancelled, rendering the rejection to these claims moot.

Claim 5 recites an amorphous alloy comprising cobalt, zirconium, and at least one of tantalum, niobium, and a rare earth element. Support for this may be found in the specification in the paragraph spanning pages 20-21. The Office Action states that Mizoguchi 852 does not teach specific materials, and then states that Fessant provides the specific materials in the claim. However, the Fessant article discusses only a pure cobalt-zirconium alloy, without the inclusion of other materials which might change the material characteristics that Fessant so laboriously analyzes.

Claim 16 has been rejected under 35 USC 103(a) as being unpatentable over Mizoguchi 852 in view of Fessant and further in view of Mizoguchi 317. Claim 16 has been cancelled, rendering the rejection to this claim moot.

Claims 11 and 18 now depend from cancelled claims. However, claims 11 and 18 are not currently being considered due to a species restriction. When the remaining claims are determined to be allowable, claims 11 and 18 will be rewritten to be in proper form for consideration.

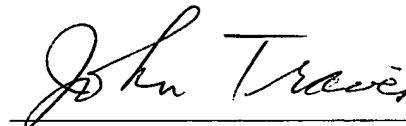
CONCLUSION

For the foregoing reasons, Applicant submits that claims 5-9 are now in condition for allowance, and indication of allowance by the Examiner is respectfully requested. Claims 11 and 18 will be rewritten upon allowance of the remaining claims. If the Examiner has any questions concerning this application, he or she is requested to telephone the undersigned at the telephone number shown below as soon as possible. If any fee insufficiencies or overpayments are discovered, please charge any insufficiency or credit any overpayment to Deposit Account No. 02-2666.

Respectfully submitted,

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APPENDIX A

Marked-up version of amended claims:

1-4. (Cancelled)

5. (Amended once) [The inductor of claim 1,] An inductor comprising:

a substrate comprising a semiconductor material;

a first dielectric layer over the substrate;

a magnetic layer over the first dielectric layer;

a second dielectric layer over the magnetic layer; and

a conductor over the second dielectric layer;

wherein the magnetic layer comprises an amorphous alloy comprising cobalt, [;]
zirconium, [;] and at least one element selected from the list of tantalum, niobium, [rhenium, or]
and a rare earth element.

6. (Amended once) [The inductor of claim 1,] An inductor comprising:

a substrate comprising a semiconductor material;

a first dielectric layer over the substrate;

a magnetic layer over the first dielectric layer;

a second dielectric layer over the magnetic layer; and

a conductor over the second dielectric layer;

wherein the magnetic layer defines at least one slot.

7. ~~Amended once~~) [The inductor of claim 1, comprising:] An inductor comprising:

a substrate comprising a semiconductor material;

a first dielectric layer over the substrate;

a magnetic layer over the first dielectric layer;

a second dielectric layer over the magnetic layer;

a conductor over the second dielectric layer;

a third dielectric layer over the conductor; and

another magnetic layer over the third dielectric layer.

10. (Cancelled)

12-17. (Cancelled)